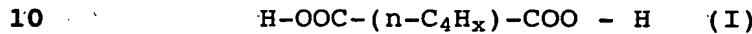


Process for the preparation of a dicarboxylic acid starting from acrylic acid

5 Abstract

A process for the preparation of a dicarboxylic acid of the formula (I)



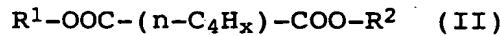
where

x is 6 or 8,

15 starting from acrylic acid,

which comprises

20 a) reacting a dicarboxylic acid diester of the formula (II)



where

25 x is 6 or 8, and

30 R^1 and R^2 , independently of one another, are C_1 -, C_2 -, C_3 - or C_4 -alkyl, aryl or heteroaryl and may be identical to or different from one another,

35 with acrylic acid to give a dicarboxylic acid of the formula (I) and a mixture of acrylic acid esters of the formulae $\text{C}_2\text{H}_3\text{-COOR}^1$ and $\text{C}_2\text{H}_3\text{-COOR}^2$, where R^1 and R^2 are as defined above,

b) separating the dicarboxylic acid of the formula (I) obtained in step a) from the reaction mixture obtained in step a),

40 c) dimerizing the $\text{C}_2\text{H}_3\text{-COOR}^1$, $\text{C}_2\text{H}_3\text{-COOR}^2$ or mixture thereof obtained in step a) to give an n-butenedicarboxylic acid diester, and

d) cleaving the dicarboxylic acid diester obtained in step c) 45 into the corresponding dicarboxylic acid of the formula (I).